

18 Lecture - CS302

Important Mcqs

1. How many data inputs does a 2-input 4-bit multiplexer have?

- a) 2
- b) 4
- c) 8
- d) 16

Answer: b) 4

2. How many control inputs does a 2-input 4-bit multiplexer have?

- a) 2
- b) 4
- c) 8
- d) 16

Answer: a) 2

3. What is the maximum number of inputs that a 2-input 4-bit multiplexer can select from? a) 2 b) 4 c) 8 d) 16 Answer: b) 4

4. In a 2-input 4-bit multiplexer, how many bits are used to represent the selection inputs? a) 1 b) 2 c) 4 d) 8 Answer: b) 2

5. What is the output of a 2-input 4-bit multiplexer if the selection inputs are 00 and the data inputs are 0110, 1011, 1100, and 1111? a) 0110 b) 1011 c) 1100 d) 1111 Answer: a) 0110

6. What is the output of a 2-input 4-bit multiplexer if the selection inputs are 10 and the data inputs are 0110, 1011, 1100, and 1111? a) 0110 b) 1011 c) 1100 d) 1111 Answer: d) 1111

7. What is the truth table for a 2-input 4-bit multiplexer? a) 16 rows b) 8 rows c) 4 rows d) 2 rows Answer: c) 4 rows

8. What is the main function of a 2-input 4-bit multiplexer? a) To convert binary signals into analog signals b) To store data c) To select one input from multiple inputs based on the control inputs d) To perform arithmetic operations Answer: c) To select one input from multiple inputs based on the control inputs

9. What is the advantage of using a 2-input 4-bit multiplexer in digital circuits? a) It reduces circuit complexity b) It increases circuit complexity c) It increases the number of wires needed to connect multiple inputs to a single output d) It increases the number of output signals Answer: a) It reduces circuit

complexity

10. Which of the following is NOT a typical application for a 2-input 4-bit multiplexer? a) Data compression b) Signal routing c) Address decoding d) Arithmetic operations **Answer: d) Arithmetic operations**